



GLASS BLOCKS

for Smarter

More Practical Homes





PC GLASS BLOCKS

made by Pittsburgh Corning Corporation—which combines the facilities and research of the world's foremost manufacturer of technical glass and its greatest producer and distributor of flat glass products.

RESEARCH FACILITIES

For several years groups of men in the factories and the laboratories of the Pittsburgh Corning Corporation, the Corning Glass Works and the Pittsburgh Plate Glass Company have been painstakingly studying all aspects of glass block design, fabrication and performance. Where it has seemed necessary or desirable the assistance of independent investigators and testing laboratories has been utilized. Among these have been the following:

The Mellon Institute of Industrial Research
The Carnegie Institute of Technology
The University of Minnesota
Pittsburgh Testing Laboratories
Electrical Testing Laboratories
Riverbank Laboratories

SERVICE TO THE TRADE

The Pittsburgh Corning Corporation maintains an able staff of field consultants and glass experts. Builders everywhere are invited to take full advantage of the cooperation and advice these men can extend in connection with problems involving these products. Complete engineering and specification service is provided on all Pittsburgh Corning Products. Communications addressed to Pittsburgh Corning Corp., Grant Bldg., Pittsburgh, Pa., or to any branch of the Pittsburgh Plate Glass Co. will receive prompt attention.

DISTRIBUTION FACILITIES

PC Glass Blocks are distributed through the warehouses of the Pittsburgh Plate Glass Company, the branches of W. P. Fuller & Co. on the Pacific Coast, and through selected dealers. Pittsburgh warehouses are located in the principal trading centers throughout the country, and form a complete network of fully-stocked headquarters, with unequalled facilities for rendering prompt and efficient service to the building trades, no matter where located.

THESE IMPORTANT PC GLASS BLOCK FEATURES

... mean easier installation, stronger panels and greater beauty

1. PC Glass Blocks are made of clear, colorless glass of proven durability. The light which streams through them is of full daylight tone, requiring no special consideration in the matching of colors, either for decoration or production uniformity.

2. PC Glass Blocks are hollow "all glass" units with fused seals made at high temperatures, relatively free of entrapped water vapor. This feature was developed by our engineers so that PC Glass Blocks will remain tightly sealed. Because of this patented method of "all glass" construction, the seal has the same coefficient of expansion as the block itself. The joint is as strong as any other part of the block. This tight seal insures a dry, dead air space within the block, which is so important to efficient heat insulation. No other glass block embodies this important feature.

3. PC Glass Blocks have all-glass mortar

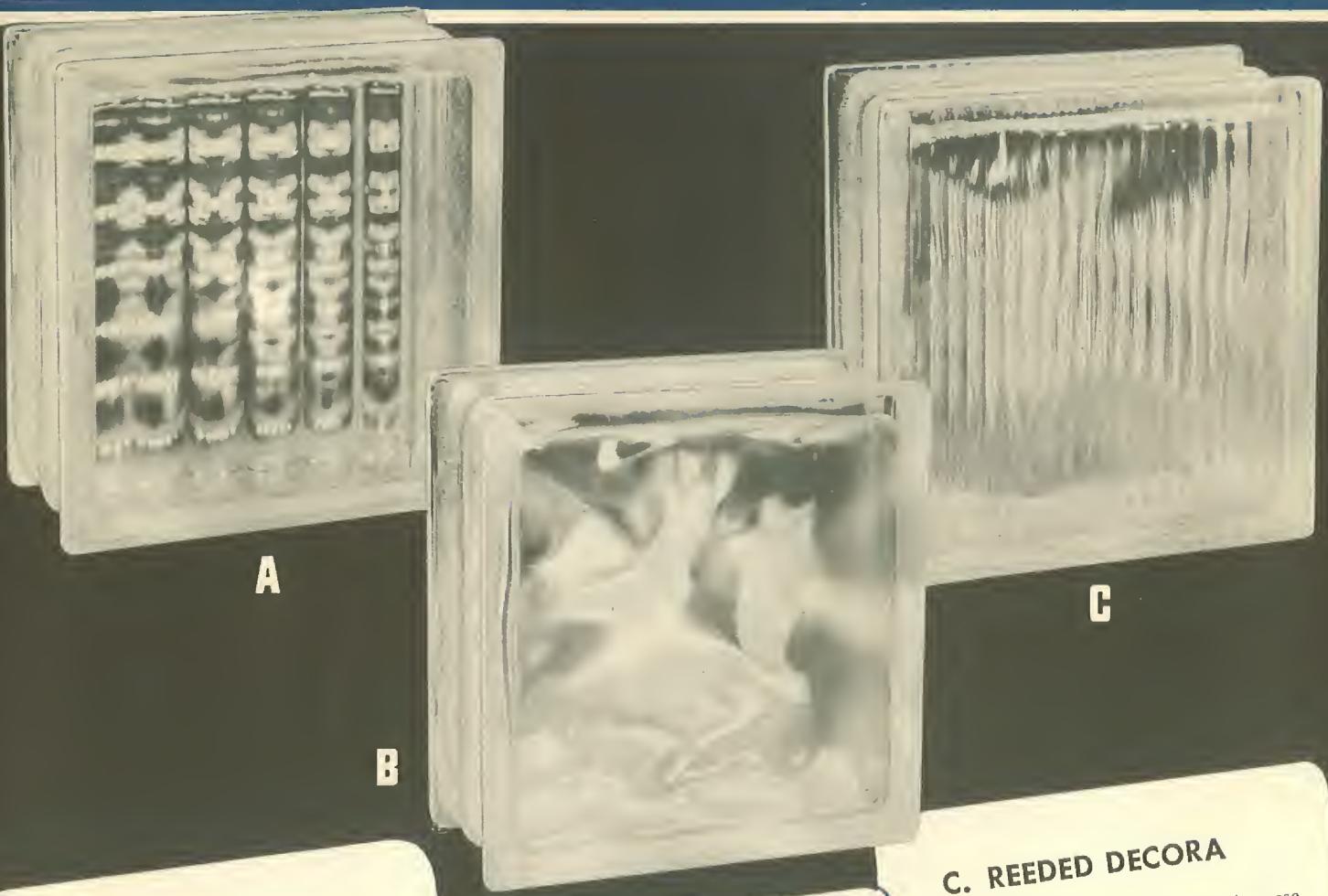
edges coated with grit-bearing water- and alkaline-resistant plastic coating. This forms a permanent bond between glass and mortar, which insures a high degree of wind resistance and weather-tightness. As is the case with all masonry, voids in mortar joints are a chief cause of leaky walls. The mason can prevent this trouble by using care in completely filling all mortar joints.

4. PC Glass Block edge construction forms a "key-lock" mortar joint, providing a full bed of mortar, yet permitting a visible joint of only about $\frac{1}{4}$ inch,



resulting in a trim panel that is pleasing to the eye. And this "key-lock" joint is easier to handle in laying.

These are all features that assure consumer satisfaction. Better color—neater appearance in panels—greater durability—all are important. All of them guard the investment of the final consumer—and the reputation of those who have recommended and installed the material.



A. ARGUS

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission with good light diffusion.
3. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical and assembled at right angles.

NOTE: This block can be supplied with smooth outside faces and interior parallel flutes on special order. This variation is not carried in stock.

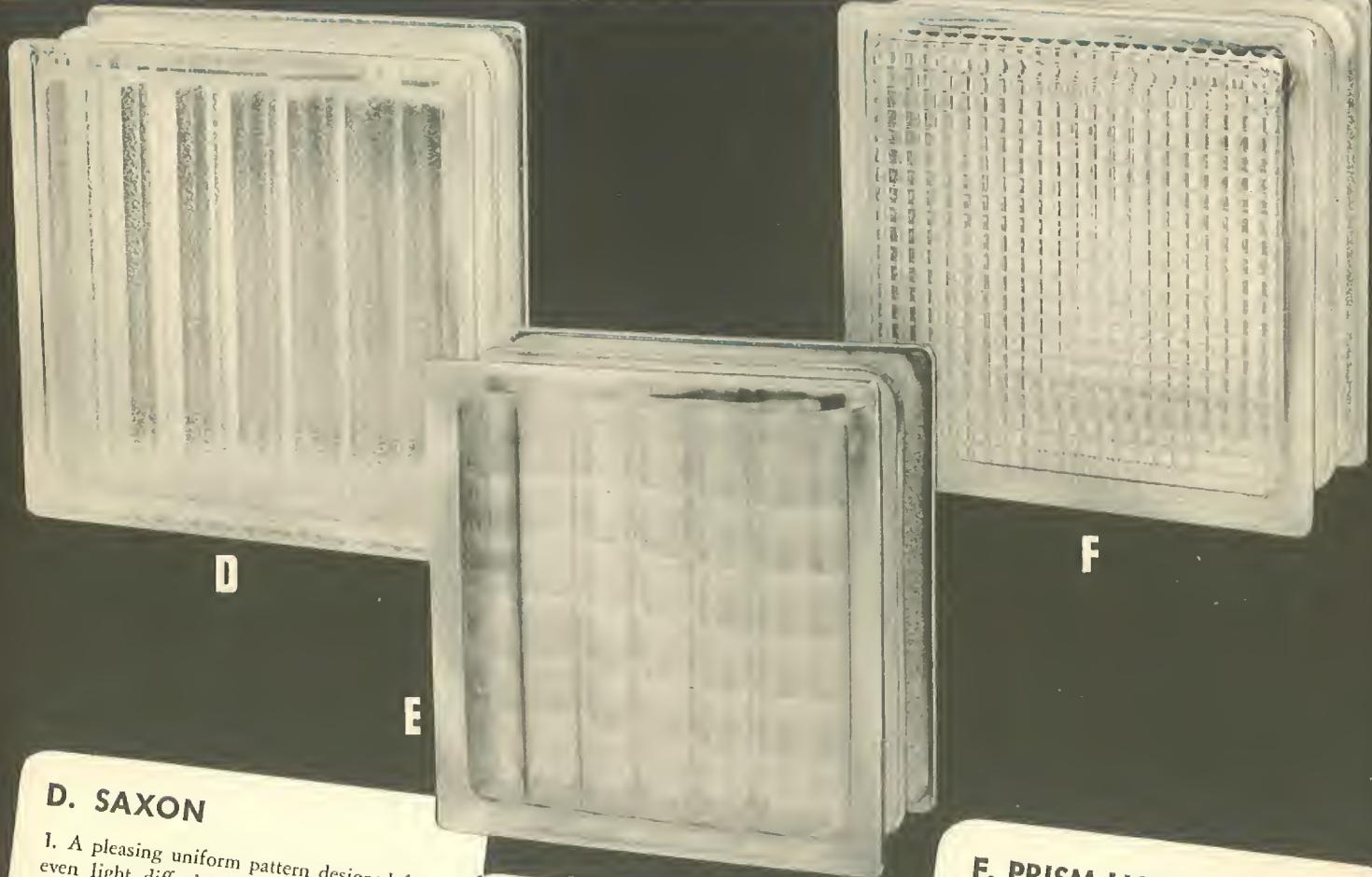
B. DECORA

1. A decorative pattern ideally suited to harmonize with both modern and conventional design.
2. High light transmission with irregular diffusion and high translucency.
3. Asymmetric design permits laying without regard to pattern.
4. Smooth outside faces insure maximum cleanability.
5. Pattern description: Smooth outside faces, asymmetric design on both interior faces.

C. REEDED DECORA

1. A modified Decora design to increase irregular pattern effects.
2. High light transmission with good diffusion and superior obscurity.
3. Should be laid with exterior flutes vertical.
4. Cleanability is maintained by the smoothly rounded exterior flutes.
5. Pattern description: Narrow convex parallel flutes on both exterior faces, asymmetric design on both interior faces.

AVAILABLE IN A WIDE SELECTION OF SIZES AND PATTERNS



D. SAXON

1. A pleasing uniform pattern designed for even light diffusion and brightness reduction, but with good light transmission.
2. Interior etched surfaces with exterior flutes produce maximum obscurity.
3. Should be laid with exterior flutes vertical.
4. Cleanability is maintained by the smoothly rounded exterior flutes.
5. Pattern description: Narrow convex flutes on both exterior faces, parallel to wide flutes on both interior faces. Both interior faces are etched.

E. ARGUS LX-75

(With Fiberglas screen)*

1. Specially designed to provide softer, more diffused light with objectionable glare eliminated, and to reduce solar heat transmission.
2. The Fiberglas screen insert produces complete light diffusion and ideal obscurity, while reducing light transmission to 68% of the standard Argus pattern. Solar heat transmission is reduced to approximately 55% of the standard Argus pattern.
3. Smooth outside faces permit maximum cleanability.
4. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results.
5. Pattern description: Smooth outside faces, interior flutes identical and assembled at right angles. Fiberglas screen securely held in glass seal.

*Manufactured by Owens-Corning Fiberglas Corporation.

F. PRISM LIGHT-DIRECTING

1. Specially designed to control the direction and distribution of light.
2. By means of unlike prisms on two inside faces, the light is so distributed that the greater part of the incident light is directed toward the ceiling, practically none in downwardly.
3. This unit should not be laid below eye level. It is designed for laying with the smooth exterior face outside—the concave exterior flutes vertical and on room side. The block is marked "Top Inside" to indicate correct setting.
4. The smooth exterior face and rounded concave flutes on room side insure easy cleaning.
5. Pattern description: Exterior face smooth, room side face vertical concave rounded flutes. Unlike horizontal prisms on both interior faces.

NOTE: This block supplied in the 8" (7 3/4" x 7 3/4") size only.

DESIGNED FOR PRACTICABILITY AND BEAUTY...

PC GLASS BLOCKS OFFER MANY ADVANTAGES

Combine the light transmitting values and beauty of glass with the insulating values of a masonry wall.

MORE DAYLIGHT

Bright, cheerful rooms are in demand for up-to-date homes. People like daylight—especially the flood of soft, diffused light that comes through a panel of PC Glass Blocks. This better lighting adds to home safety and provides eye-comfort. While cheerful sunlight streams in by day, beautiful lighting effects through the glass block panel decorate the home at night.

IMPROVED APPEARANCE

Homes that have the smart appearance of PC Glass Block panels are easier to sell. PC Glass Blocks, in beautiful patterns, are being used in many new homes today to add new beauty to kitchens, bathrooms, hallways—and many other places in the home where daylight is desired. With the use of radial and corner blocks, interesting bays and panels can be fitted correctly and charmingly into decorative schemes for almost any style of architecture. Interesting interiors can easily be created by using glass block panels for partitions, fireplaces, bars—and for many other attractive decorative units. PC Glass Blocks are well suited for use with other decorative materials. In themselves they are an interesting and flexible decorative medium.

BETTER HEAT INSULATION

Whether you are concerned with heating or cooling, glass blocks help answer the problem of heat control where large

light areas are desired. For PC Glass Blocks have less than half of the heat loss factor of ordinary single-glazed window areas—even less than that of double-glazed openings. In every PC Glass Block there is a partially evacuated, dead-air space between the two surfaces of glass. This is an effective, sealed-in heat retardant that saves money.

Thus temperature control and humidity control are much easier and less costly. Heating costs are reduced in cold weather. Air-conditioning systems are more efficient when light areas are built with PC Glass Blocks, for their lower heat conductance, and in particular their quite low solar heat transmission, materially reduce the air-conditioning load.

LESS SURFACE CONDENSATION

Where surface condensation on window areas is a problem, the use of glass blocks often proves advantageous. For moisture does not condense on the warm side of a PC Glass Block panel except under unusually severe temperature and humidity conditions. Consequently, glass block panels stay cleaner, too.

DIRT INFILTRATION ELIMINATED

Glass block panels are a valuable aid to the woman who wishes to keep her home spic and span. For they eliminate the bothersome infiltration of dirt that so frequently occurs, especially in urban areas. PC Glass Block panels let in great floods of light, but they don't allow a single speck of dirt to get through. The whole panel is sealed up tight. This factor is especially important to home owners who plan an air-cleaned heating system for themselves and wish to keep smoke from neighbors' furnaces away from their light-colored draperies or upholstering.

EASIER TO CLEAN

A whole panel of glass blocks is cleaned as one unit—not a small panel at a time. No mullions to clean—just a simple sweep of one smooth glass-and-cement area. Satisfactory cleaning can be done simply with a hose, and a long-handled brush, or a damp cloth. The translucent effect of glass block panels keeps them looking clean long after ordinary clear glass looks spotty or streaked from dirt particles.

LESS UPKEEP

With PC Glass Block panels for light-giving wall areas or partitions, maintenance costs are almost non-existent. No unsightly and dangerous corroded or rotted sash need be replaced. No costly and slow painting to be done. Once installed, the solid panel of glass and strong, clean mortar joints practically takes care of itself.

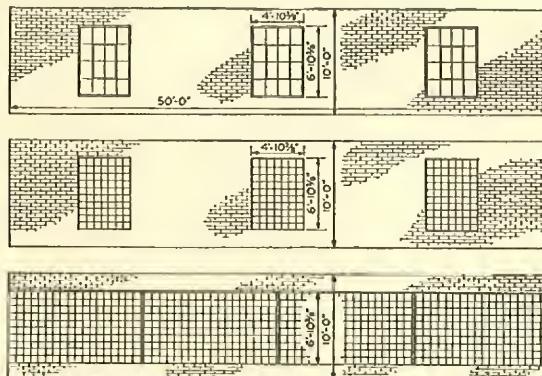
PC Glass Blocks make a permanent type of panel. Glass blocks are not easily marred or broken. Should replacement of an individual block be required, it can be done easily by a regular mason.

PRIVACY

Translucent glass blocks admit well-diffused streams of light—but they guard privacy. Unsightly views can be eliminated. Distracting views are shut off. PC Glass Blocks provide privacy so highly valued by many home buyers.

EFFECTIVE SOUND INSULATION

Glass Block panels substantially reduce distracting and undesirable noise. Even in noisy city surroundings, homes can have quiet and privacy. With glass blocks, even homes on busy corners can shut off the clatter from the street.



8" brick wall (area 50' x 10')— $\frac{3}{4}$ " plaster on furred metal lath. Temperature inside 70°F.—outside 0°F. Wind at 15 m.p.h.

A With 100 sq. ft. of single-glazed steel sash in three openings—
Heat losses—
Through brick 8960 B.T.U. per hr.
Through sash 7910 B.T.U. per hr.
Through total wall area 16870 B.T.U. per hr.

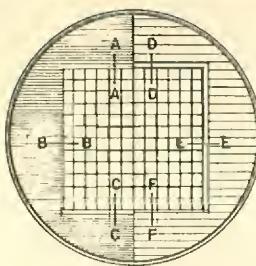
B With 100 sq. ft. of 8" PC Glass Blocks in three panels—
Heat losses—
Through brick 8960 B.T.U. per hr.
Through glass blocks 3430 B.T.U. per hr.
Through total wall area 12390 B.T.U. per hr.
Heat loss through light-transmitting area less than half, with a reduction of 26% of total heat loss through the entire wall.

C With 340 sq. ft. of 8" PC Glass Blocks—
Heat losses—
Through brick 3580 B.T.U. per hr.
Through glass blocks 11660 B.T.U. per hr.
Through total wall area 15240 B.T.U. per hr.
Heat loss 90% of panel A, but with twice as much light.

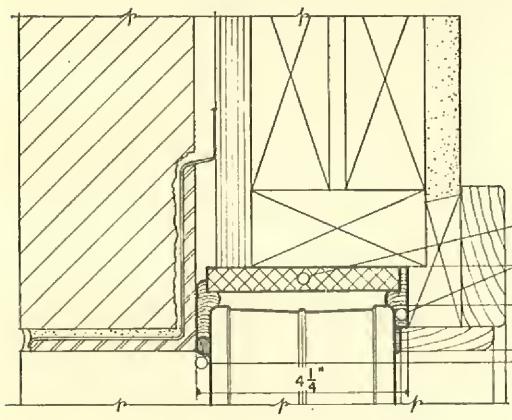
NO OTHER SINGLE BUILDING MATERIAL OFFERS ALL THESE IMPORTANT ADVANTAGES

PC GLASS BLOCKS

SCALE 3" = 1' 0"



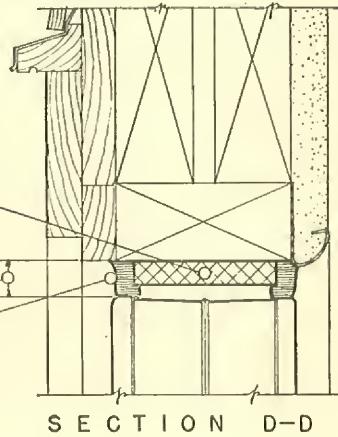
PC expansion strips may be adhered to back of chases at head and jambs with asphalt emulsion. Chases must be plumb and clear of protruding mortar, etc.



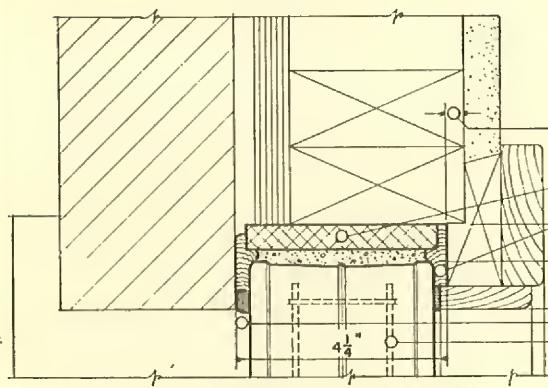
SECTION A-A

For dimensional data on wall ties, wall anchors and expansion strips, see page 13.

For panel size limitations and minimum anchorage requirements, see page 10.

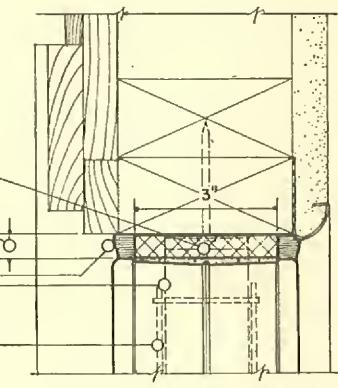


SECTION D-D

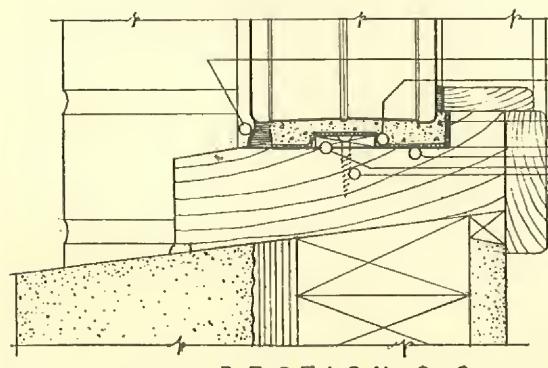


SECTION B-B

THIS DIMENSION VARIES FOR
DIFFERENT WALL THICKNESSES
PC EXPANSION STRIP
OAKUM PACKED TIGHTLY
1" MINIMUM
1/2" MINIMUM
1" MINIMUM
MASTIC CALKING
PC WALL ANCHORS
PC WALL TIES

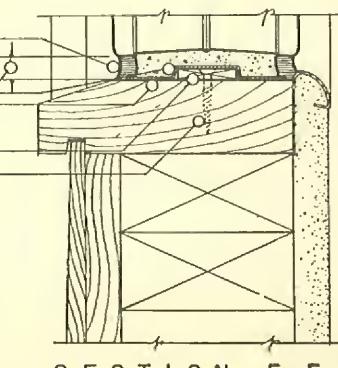


SECTION E-E



SECTION C-C

MASTIC CALKING
ROOFER'S FELT
ASPHALT EMULSION
2" MINIMUM
WOOD SHEARLOCK STRIP $1\frac{1}{4}'' \times 1\frac{1}{4}''$
F.H. WOOD SCREWS 16" O.C.



SECTION F-F

BRICK VENEER

WOOD FRAME

IN EXTERIOR BRICK VENEER AND FRAME CONSTRUCTION

CLOSED SPECIFICATIONS FOR PC GLASS BLOCK CONSTRUCTION

GENERAL CONDITIONS:

The "General Conditions" of the contract are a part of these specifications.

SCOPE OF THE WORK:

This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereinunder. This shall include the furnishing and installation of all expansion joint strips, oakum packing, felts, shearlock bars, wall ties, wall anchors, calking, asphalt emulsion, and other labor and materials necessary for a complete installation. This contract does not include the preparation of the structure to receive the glass block panels, such as chases, stiffeners, etc., except as hereinafter specified.

MATERIALS:

Glass Blocks . . . shall be hollow, partially evacuated, clear colorless glass units as manufactured by the Pittsburgh Corning Corporation. Units shall be "all glass," formed of two halves fused together at a high temperature. Edges shall be so formed as to provide a "Key-lock" Mortar Joint. All blocks shall be coated on the edges with a grit-bearing, translucent, water-and-alkaline-resistant plastic material.

Patterns—Sizes—Shapes . . . shall be as shown on the drawings or as specified hereinunder:

(Indicate PC Patterns, sizes and shapes, and locations)

Expansion Joint Material* . . . where shown or required shall be premoulded type as shown or specified by the architect or as recommended by the Pittsburgh Corning Corporation.

*—Expansion strips are available in the following types:

Premoulded Cork No. 591—4" x 1/2" x 36"

Premoulded "Fiberglas"—4 1/8" x 1/2" x 25"

(Specify type desired—see also specifications under oakum)

Shearlock Bars . . . where required shall be of size and material shown on the drawings or as recommended by the Pittsburgh Corning Corporation.

Asphalt Emulsion . . . where shown on drawings or required shall be of such consistency as to provide a heavy even coat free of lumps and voids. This material shall be subject to the approval of the architect.

Wall Ties . . . shall be of steel double wire mesh formed of two parallel wires (.150" in diameter) with electrically welded cross wires (.105" in diameter) at regular intervals, and shall be galvanized. Wall ties shall be installed in horizontal mortar joints of all glass block panels as follows:

For 5 3/4" size blocks—Every four courses.

For 7 3/4" size blocks—Every three courses

For 11 3/4" size blocks—Every course.

Wall ties shall run continuously with ends lapped not less than 6 inches and shall run from end to end of panel. Wall ties shall not bridge expansion joints.

Wall Anchors . . . where shown on drawings and as recommended by the Pittsburgh Corning Corporation shall be No. 20 gauge perforated steel strips 24 in. long by 1 3/4 in. wide galvanized after perforating. All wall anchors must be crimped within expansion joints, and shall generally be placed in the same joint as wall ties and must be completely embedded in the mortar joint of the glass block panels.

Mortar . . . shall be one (1) part Portland Cement, and one (1) part lime, and four (4) to six (6) parts sand measured by dry volume, mixed to a consistency as stiff as

will permit good working and shall be drier than for ordinary clay brick work.

Mortar for exterior panels shall contain a metallic stearate type waterproofer. This shall be of an integral waterproofing type added at the time the mortar is mixed, or a waterproof Portland Cement incorporating a metallic stearate. Mortars prepared from masonry cements of low volume change mixed according to the recommendations of the manufacturer may be used if desired. Setting accelerators should not be used and freezing must be prevented without the use of anti-freeze compounds.

Cement . . . shall be a standard brand conforming with the specifications of the American Society for Testing Materials, A.S.T.M. Designation C9-30.

Lime . . . shall be of an approved brand high calcium well-slaked quicklime, hydrated lime, or masons' hydrate, conforming respectively with A.S.T.M. specifications C5-26 and C6-31. Where lime in the form of putty is used it shall be added on the basis of "lime solids" content.

Sand . . . shall be free from silt, clay and loam in excess of 3% by weight as determined by decantation. Not more than 5% by weight shall pass a No. 100 mesh sieve and 100% shall pass through a No. 8 mesh sieve.

Oakum . . . where indicated on drawings* or required for lateral cushioning of glass block panels at jambs and head chases, shall be of non-staining lightly oiled type and shall be subject to the approval of the architect.

*—Premoulded expansion joint material is preferable, but shredded oakum loosely packed may be substituted in expansion joint spaces at jambs and head in chase construction.

Calking . . . mastic calking compounds as approved by the architect shall be applied evenly and to the full depth of recess provided at both interior and exterior perimeters of all glass block panels.

FLASHINGS:

Unless otherwise specified this contractor shall furnish and install in locations shown or where required, such flashings as are necessary to provide a complete installation.

INSTALLATION:

Expansion joint strips shall be adhered to the jambs and heads with asphalt emulsion and shall run continuously in the expansion space and must rest directly on sill. Apply heavy coat of asphalt emulsion to sills permitting same to dry at least two hours before laying mortar.

All mortar joints must be completely filled with mortar. Mortar must not bridge across expansion joints. Mortar joints shall not be furrowed. Blocks shall be laid up plumb, true to line with courses level and with 1/4" visible mortar joints. While mortar is still plastic and before final set, the joints shall be compressed to a depth necessary to expose the corners of the blocks as sharp clean lines and joints immediately tooled, slightly concave and smooth. The number of courses of glass blocks laid in successive lifts shall be limited to prevent compaction of joints.

CLEANING:

While mortar is still plastic and before final set, this contractor shall clean off all mortar and foreign material from the glass block surfaces. Final cleaning shall be done by others, after mortar has reached its final set.



A Pittsburgh Structural Mirror above the mantel is a simple way to give a living room spaciousness, life and sparkle. This use of glass is increasingly popular.

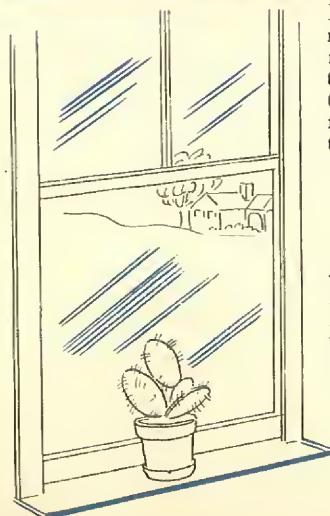


Wainscoting of polished, beautiful Carrara Glass dresses up a bathroom or kitchen immeasurably. It is easy to clean, permanent, impervious to moisture and chemicals.

SUGGESTIONS FOR THE USE OF
PITTSBURGH GLASS PRODUCTS
 IN THE HOMES YOU BUILD



Lots of light on the staircase makes it safer. PC Glass Blocks in the stairwell are new and attractive. They improve the exterior appearance of a house, and make it quieter, too . . . for they deaden outside noises.



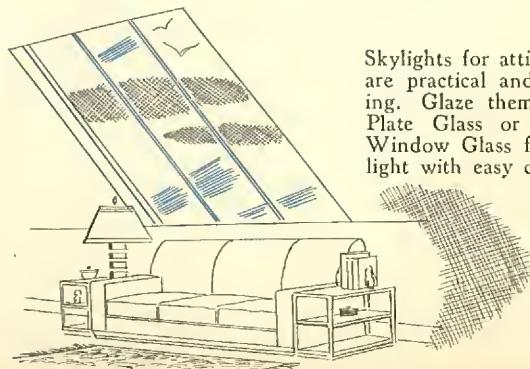
Window sills of Carrara Structural Glass are smart-looking and practical. Moisture cannot harm them—and wiping with a damp cloth keeps them clean.



Partition treatments of PC Glass Blocks, with niche lining of plate glass, Carrara, or mirrors, are simple but effective.



A full-length mirror lets a woman see herself as she really is. Easily applied over any door, such a mirror is useful and decorative.



Skylights for attics or studios are practical and good looking. Glaze them with Vista Plate Glass or Pennvernon Window Glass for plenty of light with easy cleaning.



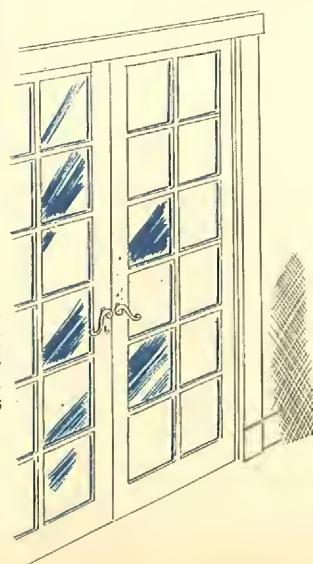
Windows are important in a home's appearance and livability. Well designed windows, glazed with Pennvernon Window Glass, are sure to give satisfaction.



Glass shelves are one of the newest ideas for the modern home. As shown here, plate glass shelves in front of a mirror make a most attractive niche for bric-a-brac.



Solariums offer a wide scope for the use of glass. Vista Plate Glass windows admit the sunlight, plate glass window shelves make window areas interesting. Sill covers of Carrara, and a semi-partition of PC Glass Blocks complete an attractive room.

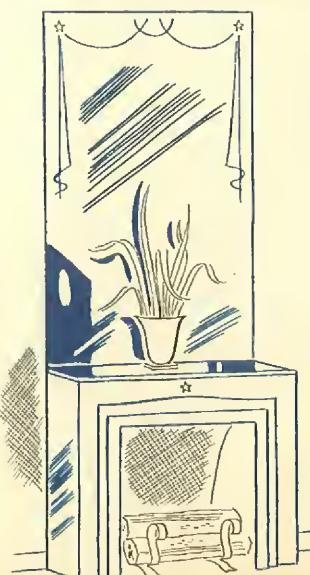


French doors like these, opening from living room, dining room or library, are always popular. Glaze them with Pennvernon Window Glass for beauty and good vision.

HOW TO USE PITTSBURGH



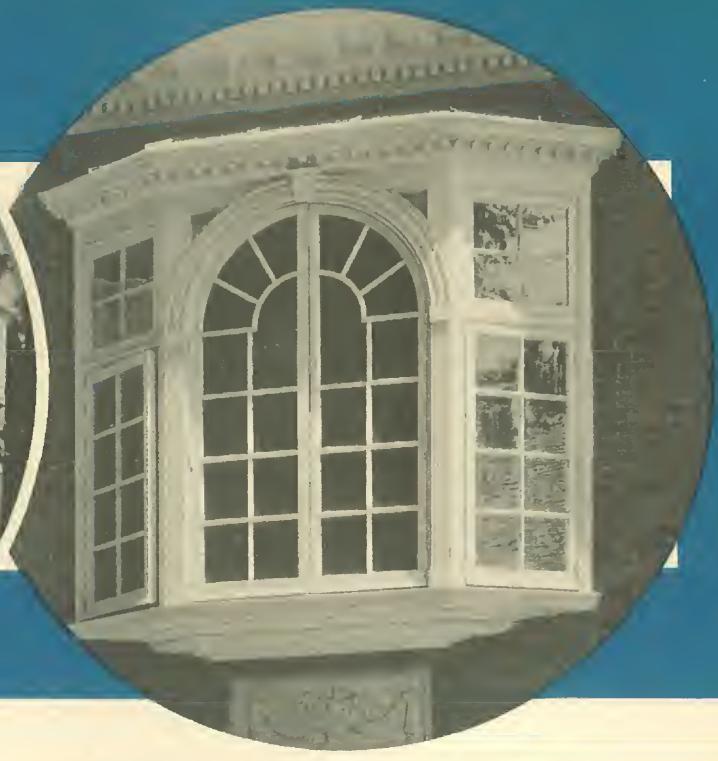
Shut off that unattractive view with PC Glass Blocks . . . and you won't have to sacrifice daylight. A smart corner panel provides light from two directions, makes rooms more comfortable and easier to heat, because of PC Blocks' high insulating value.



Fireplace facing of beautiful plate glass mirrors, extending from floor to ceiling, can make any room lovely. Remember, you can get special effects by using colored mirrors.



A decorative terrace wall of PC Glass Blocks is new, different and attractive. It gives welcome privacy, a sense of coziness, and is a wonderful windbreak, too.

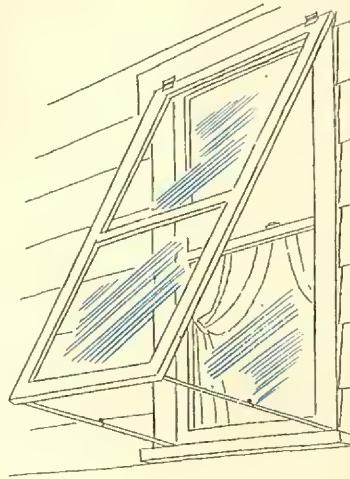


Use Vista Plate Glass for glazing windows which overlook a nice view. For this brilliant, reflective glass assures perfect, undistorted vision from all angles.

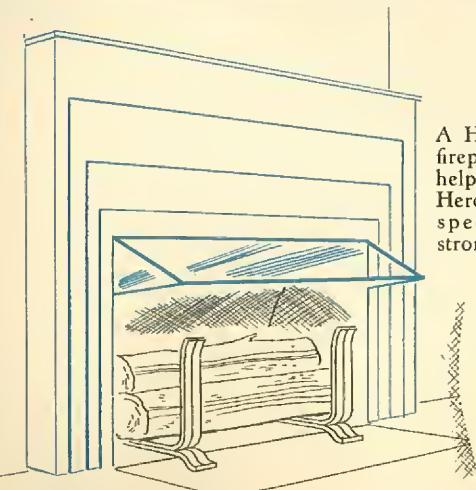
GLASS PRODUCTS . . .



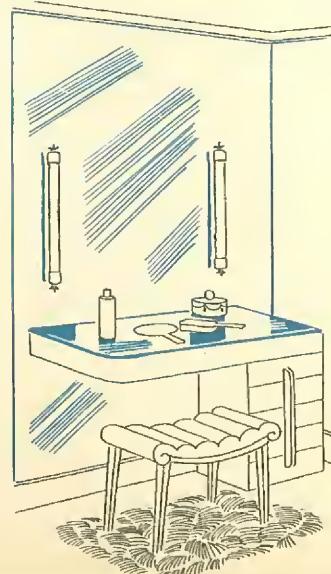
A bar built with PC Glass Blocks, and gayly lighted from behind, is modern, friendly and tasteful. It is easy to keep clean, for PC Glass Blocks can be washed easily with a damp cloth.



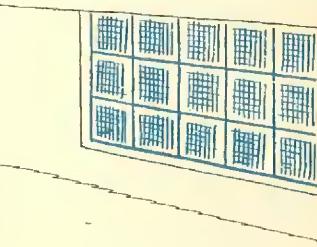
Winter windows greatly reduce heat loss in the home in winter, keep inside temperatures uniform. Use Pennvernon or plate glass. And PC Glass Blocks make good basement windows, for light and insulation.

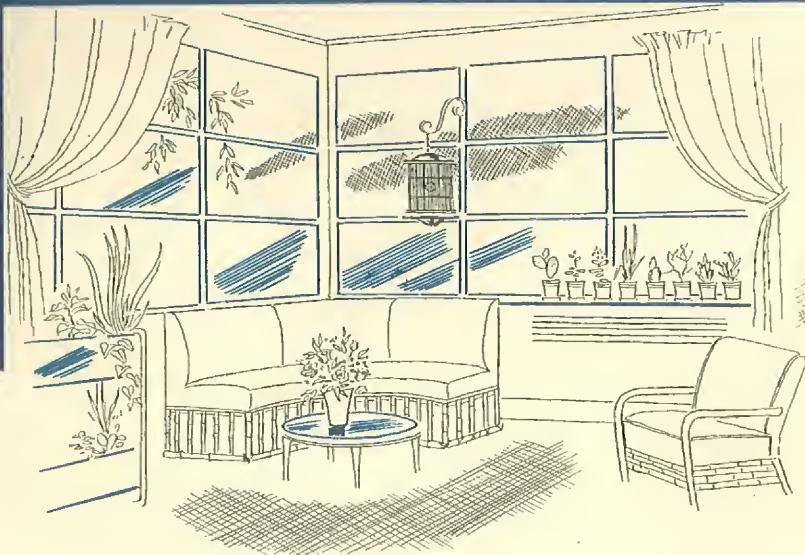


A Herculite Plate Glass fireplace screen like this helps a fireplace to draw. Herculite is glass that's specially treated to be strong and heat resistant.

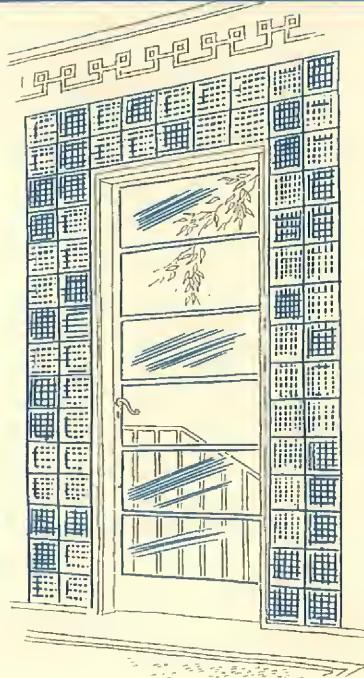


The powder room is an important feature in the newer homes. Make it outstanding with a mirrored wall, and a make-up shelf of Carrara or plate glass which is proof against spilled cosmetics.

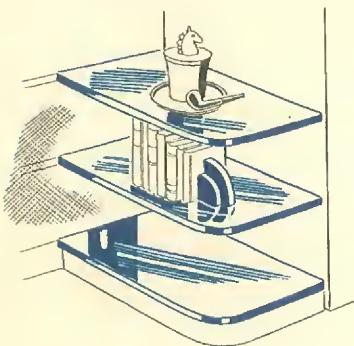




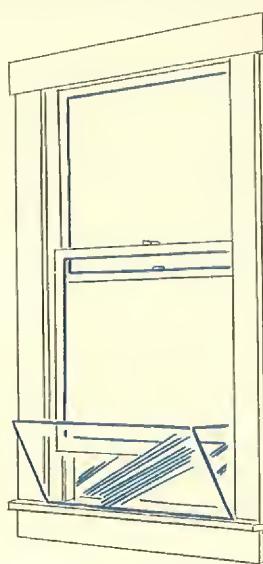
A sun porch, they say, is one of the most popular and lived-in rooms in the house. To invite the sunlight, and assure satisfactory vision, glaze the sun porch windows with Pennvernon Window Glass or Vista Plate Glass.



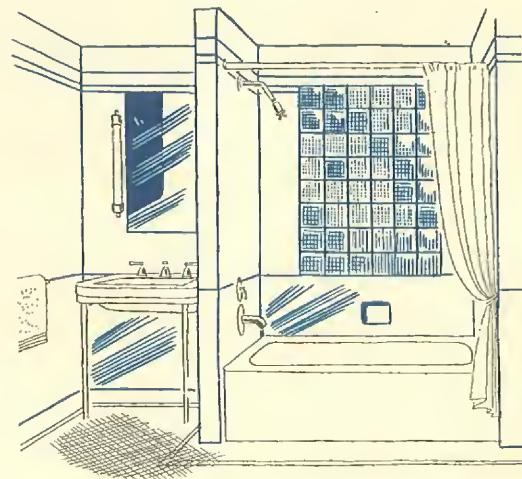
The front door can be made extra-inviting by PC Glass Blocks surrounding it. They bring lots of daylight into the hall, and say "hello" to guests.



And here's an idea for corner shelves—all of Carrara Glass or Heavy Plate Glass if you prefer. They have the polished, lustrious appeal which only brilliant, reflective glass can provide.



Ventilators of plate glass or Pennvernon combine good looks with real utility. They prevent drafts at open windows, and protect rugs and furniture indoors from the elements.



PC Glass Blocks over the bathtub are a definite addition to bathroom beauty. They assure good lighting, and are especially effective when used with Carrara walls and lovely mirrors.

PITTSBURGH PLATE GLASS COMPANY PITTSBURGH CORNING CORPORATION

Grant Building, Pittsburgh, Pennsylvania

Products available through branch offices in principal cities and through W. P. Fuller & Co., on the Pacific Coast.